

VIA ELECTRONIC FILING

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

|   |   |                  |
|---|---|------------------|
| In the Matter of  | ) |                  |
|   | ) |                  |
|   | ) |                  |
| Amendment of Part 101 of the Commission's Rules to      | ) | WT Docket 10-153 |
| Facilitate the Use of Microwave for Wireless Backhaul   | ) |                  |
| and Other Uses and to Provide Additional Flexibility to | ) |                  |
| Broadcast Auxiliary Service and Operational Fixed       | ) |                  |
| Microwave Licenses (WT Docket No. 10-153).              | ) |                  |

**COMMENTS OF WIRELESS STRATEGIES INC.  
REGARDING THE SECOND FURTHER NOTICE OF PROPOSED RULE MAKING  
AND SECOND NOTICE OF ENQUIRY WT DOCKET 10-153**

Wireless Strategies Inc. ("WSI") hereby respectfully submits its comments on the Second Further Notice of Proposed Rule Making and Second Notice of Inquiry in the above captioned proceeding<sup>1</sup>.

**I. Smaller Antennas**

The stated goals of the Commission in this Second Further Notice of Proposed Rulemaking include increasing the flexibility of Part 101 rules to promote wireless backhaul, and comments on specific proposals made by parties to allow smaller antennas in other Part 101 microwave bands. A review of the rules using a decision tree (illustrated below) shows that non-compliant antennas (of any size) will not cause harmful interference to existing stations or block new applicants *under existing rules*, thereby promoting wireless backhaul as well as enterprise and consumer broadband access.

---

<sup>1</sup> Second Report and Order, Second Further Notice of Proposed Rule Making, Second Notice of Inquiry, Order on Reconsideration, and Memorandum Opinion and Order, FCC 12-87, WT Docket No. 10-153.

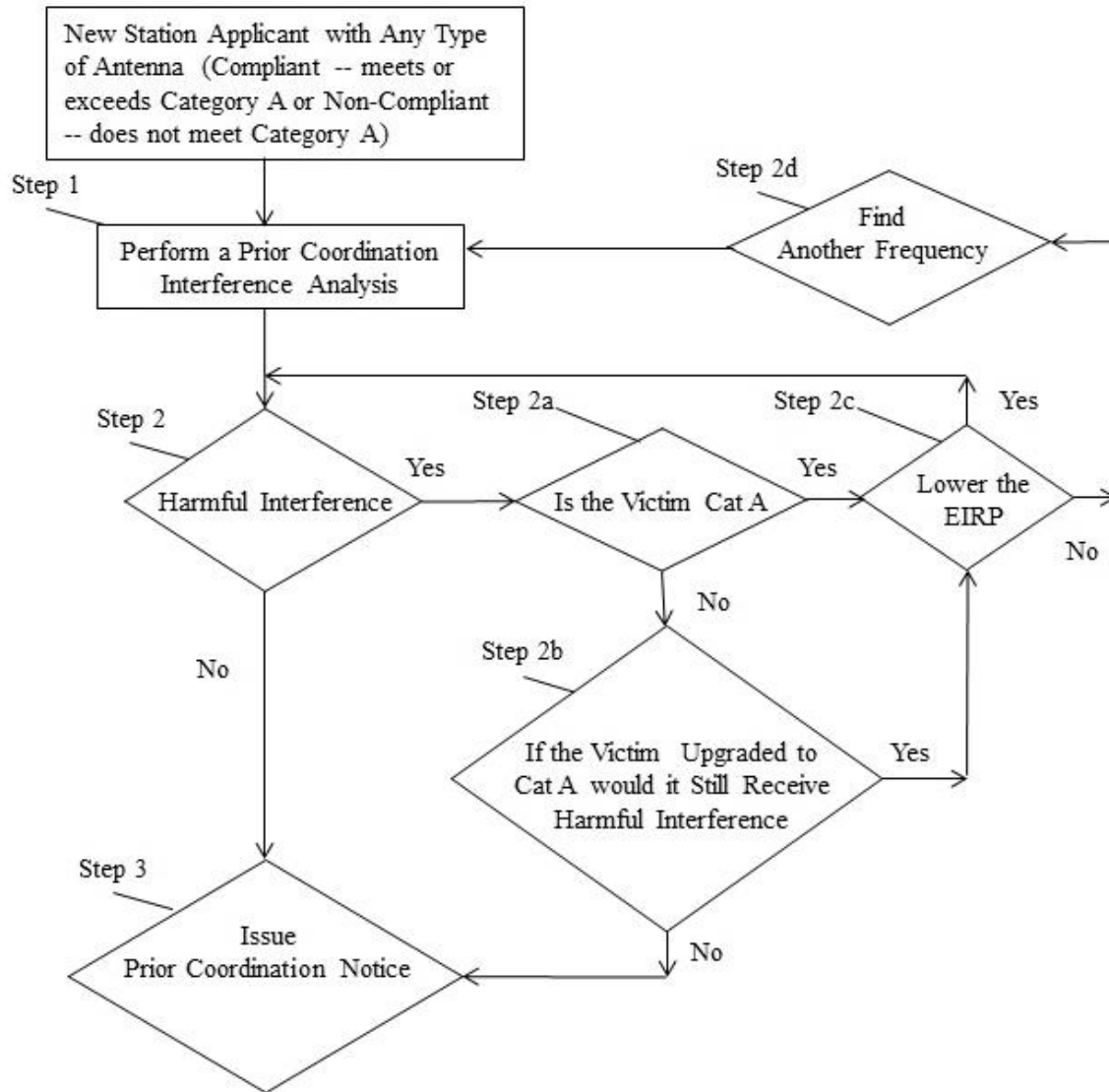
## **II. Review of Existing Rules**

A review of the existing rules and procedures for obtaining a license are displayed in the attached decision tree diagrams, Figures 1 and 2. These figures show that there is no benefit from adding non-compliant antenna specifications to the "Antenna Standards" table of 101.115 since the specifications

- are not a part of the prior coordination process,
- do nothing to minimize the potential for harmful interference or for preventing the blockage of new applicant paths,
- add unnecessary and counter-productive regulations.

A walk-through of Figure 1 is given below.

**Figure 1: Initial Prior Coordination Successful/Unsuccessful**



Step 1.

The new applicant, with any type of antenna, performs a prior coordination interference analysis in accordance with Rule 101.103.

Step 2.

If the prior coordination interference analysis showed no interference issues, the applicant would proceed to Step 3 and issue a Prior Coordination Notice (PCN).

If the prior coordination interference analysis showed there was harmful interference, the applicant would proceed to Step 2a.

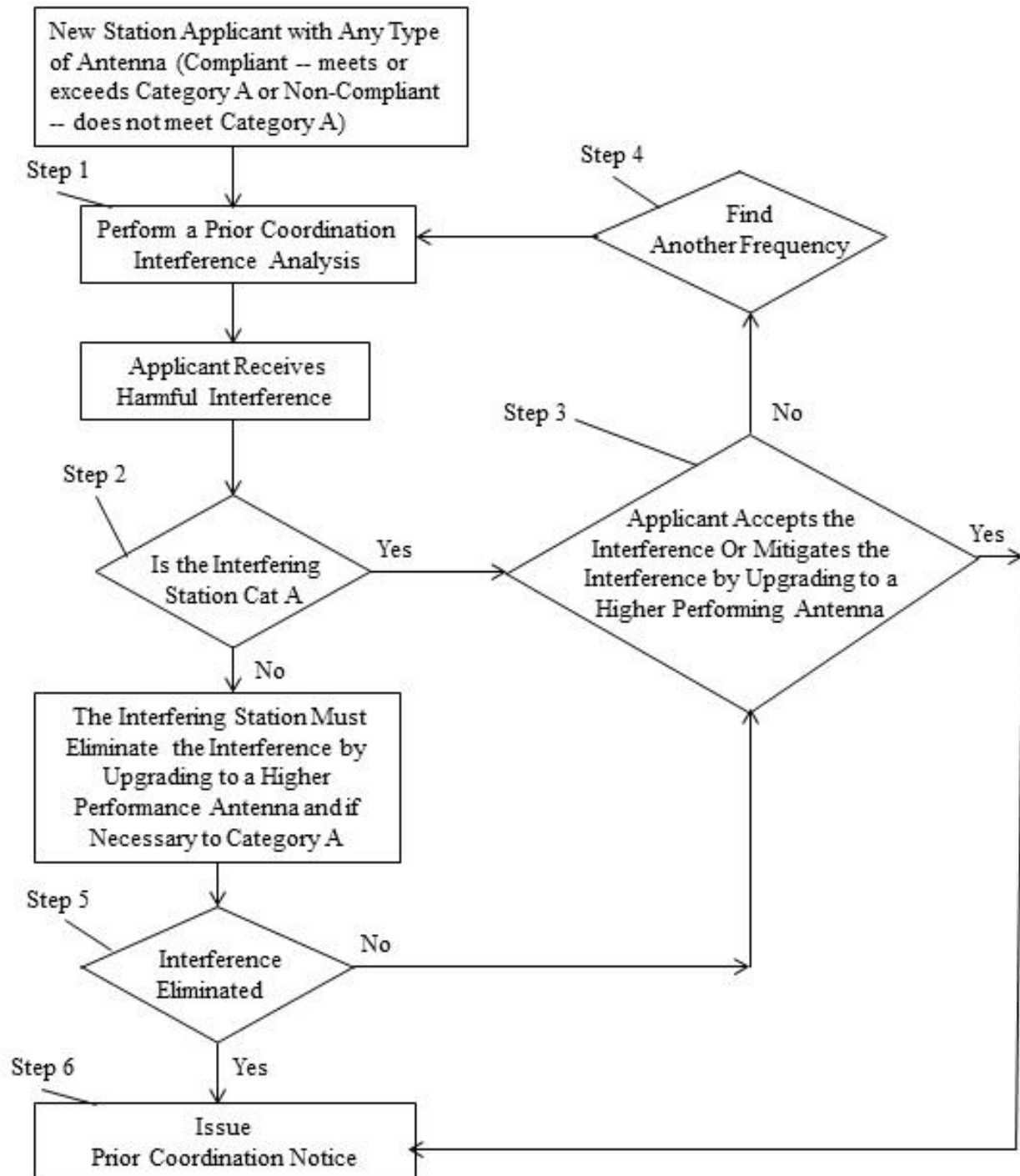
Step 2a.

If the victim station(s) were authorized with compliant (Category A) antennas, the applicant would proceed to Step 2c where the applicant would have to decide if the interference could be eliminated by increasing the applicant's antenna performance (size) or by reducing the power applied to the antenna (or both), and still meet the new applicant's path performance and/or cost requirements. If yes, the applicant would proceed via Step 2 to Step 3 and issue a PCN. If the answer was no, the applicant would proceed to Step 2d and find another frequency before returning to Step 1.

If the victim station were authorized with a non-compliant antenna, the victim would, as required by Rule 101.115 (c), have to upgrade the antenna performance, if necessary to Category A. If this eliminated the interference issue, the applicant would proceed to Step 3. However, if the victim upgraded to a Category A antenna and the interference still existed, the applicant would proceed to Step 2c. If at Step 2c the applicant could not lower the EIRP and meet the applicant's path performance and/or cost requirements, the applicant would have to proceed to Step 2d and choose another frequency before returning to Step 1.

The case where the new applicant has shown through the prior coordination process that it will not *cause* harmful interference, but that it would *receive* harmful interference, is addressed in Figure 2. A walkthrough of Figure 2 is given below.

**Figure 2: Applicant Does Not Cause Interference but Receives Interference**



Step 1.

The new applicant, with any type of antenna, performs a prior coordination interference analysis in accordance with Rule 101.103. The prior coordination interference analysis shows interference into the applicant's receiver. The applicant proceeds to Step 2.

Step 2.

The applicant determines if the interfering station is authorized with a compliant (Category A) or a non-compliant antenna. If a Category A antenna, the applicant proceeds to Step 3.

Step 3.

Applicant must either accept the interference or attempt to mitigate the interference by upgrading to a higher performance (larger) antenna. If the applicant can accept the interference or can accept a larger antenna then the applicant proceeds to Step 6 (Issue PCN). If the applicant cannot accept the interference or a larger antenna, the applicant must proceed via Step 4 (Find Another Frequency) to Step 1.

If at Step 2 the interfering station was determined to be authorized with a non-compliant antenna, the applicant proceeds to Step 5 -- as, pursuant to Rule 101.115 (c), the non-compliant station is required to upgrade the antenna performance, and if necessary upgrade to Category A. If the interference is eliminated, the applicant proceeds to Step 6 and issues a PCN. If the interference is not eliminated with a Category A antenna, the applicant proceeds to Step 3.

### **III. Summary and Conclusions**

A review of the Rules using the decision tree flow diagrams shows that non-compliant antennas with any antenna pattern and size can be safely used under existing Rules 101.103 and 101.115.

Therefore for clarification WSI respectfully recommends that the Commission add a footnote to Rule 101.115 stating: "Non-compliant antennas (antennas not meeting Category A specifications) can be authorized on the condition that they must not cause harmful interference and must accept harmful interference pursuant to Rules 101.103 and 101.115 (c)."

By this simple footnote, the Commission would achieve its goals of (a) allowing smaller antennas that will not cause harmful interference to new applicants or block new applicant paths, and (b) improving and modernizing the Rules and increasing the flexibility of Part 101 to promote wireless backhaul, enterprise and consumer wireless broadband.

Respectfully submitted,

Michael Mulcay, Chairman  
Wireless Strategies Inc.  
PO Box 2500  
Carmel Valley, CA 93924

January 28, 2013

cc via email:

Julius Genachowski, Chairman  
Robert McDowell, Commissioner  
Mignon Clyburn, Commissioner  
Jessica Rosenworcel, Commissioner  
Adjit Pai, Commissioner  
Zachary Katz, Chief of Staff to Chairman Genachowski  
Charles Mathias, Special Council to Chairman Genachowski  
Angela Giancarlo, Chief of Staff to Commissioner McDowell  
Dave Grimaldi, Senior Legal Advisor to Commissioner Rosenworcel  
Matthew Berry, Chief of Staff to Commissioner Pai  
Ruth Milkman, Chief WTB  
James Schlichting, Senior Deputy Chief WTB  
John S. Leibovitz, Deputy Chief WTB  
Tom Peters, Chief Engineer, WTB  
Melissa Glidden Tye, Legal Advisor WTB  
Blaise Scinto, Chief Broadband Division WTB  
John Schauble, Deputy Chief Broadband Division WTB  
Stephen Buenzow, Deputy Chief Broadband Division WTB  
Charles Oliver, Attorney Advisor Broadband Division WTB  
Brian Wondrack, Attorney Advisor Broadband Division WTB  
Julius Knapp, Chief Office of Engineering Technology